ORIGINAL

NEW APPLICATION

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BEFORE THE ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission
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IN THE MATTER OF THE APPLICATION OF MORENCI WATER AND ELECTRIC COMPANY – ELECTRIC DIVISION – FOR APPROVAL OF ITS 2014-15 ENERGY EFFICIENCY IMPLEMENTATION PLAN AND REQUEST FOR PARTIAL WAIVERS	DOCKET NO. E-01049A-13-0160 **APPLICATION FOR APPROVAL AND REQUEST FOR PARTIAL WAIVERS**

The Morenci Water and Electric Company ("MWE") hereby submits its proposed Energy Efficiency Implementation Plan for 2014 and 2015 ("2014-15 EEIP") in compliance with the Arizona Corporation Commission's Energy Efficiency Rules ("EE Rules") – A.A.C. R14-2-2401 through R14-2-2419. MWE requests approval of its proposed 2014-15 EEIP, which is attached to this pleading as Exhibit 1. The 2014-15 EEIP continues to maximize the potential for energy efficiency within its service territory, based on the specific demographics and characteristics within its service territory.

MWE further requests that the partial waivers previously approved for 2012 and 2013 be continued: (1) excluding Freeport-McMoRan Copper & Gold, Inc. ("Freeport") mining operations load at Morenci and Safford from the calculation of the Energy Efficiency Standard; and (2) excluding MWE from the EE Rules standards for non-mining load to the extent that MWE fails to meet those standards given the unique aspects of MWE's service territory that will be explained in the following sections.

I. Introduction.

MWE's load profile is well-documented. More than 98 percent of its load is mining load due to energy sales for Freeport mining operations at Morenci and Safford. Electricity represents a major

cost input to mining operations at both locations. In terms of number of customers, MWE is a small electric utility that serves approximately 2,432 non-mining customers in and around the Morenci Townsite, Arizona and the Town of Clifton. MWE serves the Freeport Morenci mine in accordance with an agreement approved in Decision No. 66937 (April 21, 2004). MWE also serves the mine owned and operated by Freeport Safford, Inc. as approved in Decision Nos. 69200 and 69211 (December 21, 2006). MWE's non-mining customers are predominantly residential. Further, the mining operations at Morenci and Safford are the only two customers with demand over 3 MW each month. Presently, MWE owns no generation and procures all of its power from the wholesale market to meet load.

II. Partial Waivers Request.

MWE requests two partial waivers, as detailed in the following paragraphs:

1. Waiver to exclude mining load.

MWE requests to exclude mining load from the calculation of the Energy Efficiency Standards under the Energy Efficiency Rules for 2014 and 2015. Electricity is a major cost input to mining operations; consequently, mining companies have every incentive to make those operations as energy efficient as possible.[1] But the fact remains that those mining operations require a significant amount of energy to operate both now and in the future. Further, since mining operations have a high load factor (meaning the mines are operable at a level capacity 24 hours a day and seven days a week) there is not much opportunity for peak load reduction. Based on these factors, MWE believes excluding mining load is reasonable and appropriate. MWE cannot meet the proposed energy efficiency standards if mining load is included in determining its energy efficiency requirements.

[1] MWE provides updated information on the development and operation of a Sulfuric Acid Plant (that MWE believes is a combined heat and power facility as defined in the EE Rules) at the Safford mine-site that produces excess power available for mining operations.

2. Excluding MWE from the EE Rules standards for non-mining load.

The unique factors within MWE's service territory will make it extremely difficult to meet the EE Rules standards even for non-mining load. There is practically no growth in MWE's service territory beyond any housing Freeport added to accommodate personnel for mining operations. Consequently, programs for new housing and new construction are not applicable in MWE's service territory. Further, many of its existing customers do not have Heating, Ventilation and Air Conditioning ("HVAC") units or pools (let alone pool pumps). Many of the programs offered by the large Arizona electric utilities to existing customers are simply not applicable to MWE's service territory (such as programs to address load from use of HVAC and pool pumps.) The Company proposes to maintain its portfolio of programs, which are likely to have success; but it has modified those programs given the challenges it experienced trying to implement the programs for 2012 and 2013.

MWE believes continuing its portfolio of programs detailed in the plan maximizes the potential for energy efficiency within its service territory – and result in savings for its customers. MWE believes its programs and portfolio will be cost-effective. Even so, MWE will very likely not be able to meet the standards within the EE Rules *even with* the mining load excluded from the requirements. The specific demographics and characteristics present in MWE's service territory make it highly unlikely *any* portfolio of programs will result in enough reduced consumption to meet the aggressive standards put forth in the EE Rules. For this reason, MWE requests continuing the waiver for 2014 and 2015 to exclude MWE from meeting the EE Standards for non-mining load given the facts and circumstances of MWE's load and customer profile.

In consideration for these waivers, MWE notes that it is not seeking any performance incentive to continue its EE programs. MWE also did not seek any lost-fixed cost recovery mechanism in its recent rate case and is not seeking to implement one here. Further, MWE is seeking approval of a set surcharge amount from mining operations at both Morenci and Safford to fund programs geared towards MWE's non-mining customers. This will reduce the amount of funding necessary from non-mining customers.

III. Energy Efficiency Surcharge.

MWE proposes to maintain the same rates for its Energy Efficiency Adjustor Mechanism ("EEAM") to recover the costs associated with its 2014-15 EEIP. The EEAM is designed to recover costs in the same year in which funds are expended and based upon the energy efficiency budget included in this plan – which assumes that MWE's waiver requests are granted. MWE proposes to roll over into subsequent years any funds not expended in a particular year. The EEAM bank balance as of May 20, 2013 was approximately $21,781.40.

IV. Conclusion.

MWE commits to working with the Commission and intends to make best efforts to maximize the potential for energy efficiency within its service territory. MWE therefore requests that the Commission approve its 2014-15 EEIP, grant the requested partial waivers, and approve maintaining the current EEAM rates and charges.

RESPECTFULLY SUBMITTED this 31st day of May, 2013.

MORENCI WATER AND ELECTRIC COMPANY

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Morenci Water and Electric Company

Energy Efficiency Implementation Plan

2014 to 2015

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Background

Introduction

In Decision No. 71819 (August 10, 2010), the Arizona Corporation Commission approved the Energy Efficiency Rules ("EE Rules"). The Arizona Attorney General's Office certified the EE Rules on November 1, 2010. The EE Rules, codified at A.A.C. R14-2-2401 through R14-2-2419, became effective on December 31, 2010. In accordance with those rules, Morenci Water and Electric Company ("MWE") is filing its Energy Efficiency Implementation Plan for 2014 through 2015 (hereinafter referred to as MWE's "2014-15 EEIP").

In Decision No. 73090 (April 5, 2012) the Commission approved MWE's 2012-13 EEIP. The plan consisted of four programs:

- Compact Fluorescent Lamp ("CFL") Program.
- Appliance Recycling Program.
- Low Income Weatherization ("LIW") Program.
- Education & Outreach Program.

These programs were originally derived from existing programs approved for Arizona Public Service Company ("APS"), Tucson Electric Power Company ("TEP"), and UNS Electric, Inc. ("UNS Electric"), but tailored to meet the unique nature of MWE's service territory and customer profile.

For 2014-15, MWE plans to continue these programs with modifications where needed. MWE's 2014-15 EEIP is a simplified portfolio of programs designed so that MWE can effectively administrate those programs and have the best opportunity to maximize reduced energy consumption within its service territory – resulting in savings for its residential customers and non-residential customers fewer than 3 megawatts (MW).

Waiver Requests

1. Waiving energy sales to mining operations.

In Decision No. 73090, MWE received a waiver to exclude the energy sales to the Morenci and Safford mine sites from the calculation of the Energy Efficiency Standard required in A.A.C. R14-2-2404 through 2013. MWE is requesting that the waiver remain in place at least through 2015 – and is making the request in accordance with A.A.C. R14-2-2419. MWE's load profile is well-documented. More than 98 percent of its load is mining load due to energy sales for Freeport McMoRan Copper & Gold, Inc. ("FMI") mining operations at Morenci and Safford. Electricity represents a major cost input to

mining operations at both locations; therefore there is already every incentive to make those operations as efficient as possible.

MWE understands from its communications with those responsible for managing the mining operations energy needs that they continue to explore means to improve processes and utilize technologies to reduce demand and usage wherever feasible. FMI independently examines means to make mining operations at both locations as efficient as possible through its Safford Technology Center. Even so, those improvements are done independent of any program or offering (self-directed or otherwise) MWE could provide and where any funding from the utility is simply not needed. MWE further understands that the mining operations at Morenci and Safford will continue to seek processing and technological improvements to reduce energy usage because it is in their best interest to reduce one of the largest cost inputs to operating those mines.

In addition, MWE understands that the Safford Sulfuric Acid Plant described in its 2012-13 EEIP is operational. As MWE explained in that plan, this plant uses steam generated from heating sulfur to produce up to 17 MW of electric generation. Of that amount, 12 MW of capacity will be available for mining operations; 5.0 MW of capacity will be used for the sulfuric acid plant operations. MWE understands that it was estimated that the plant can produce up to 94,608,000 kilowatt hours (kWh) of excess power annually. That plant became operational in mid-2011. MWE believed that the plant qualified as a combined heat and power facility under the definition of the energy efficiency rules[1] – because it utilizes useful process heat to produce electricity and require no additional power from conventional sources besides that used for start up. Even so, MWE did not request, and is still not requesting, that the plant count toward meeting its requirements in 2014-15 because it is seeking to maintain the waiver to exclude load from mining operations.

Further, the mining operations at Morenci and at Safford require a significant amount of energy in order to operate both now and in the future. MWE cannot meet the proposed energy efficiency standards if mining operations continue. Those operations constitute the key economic driver for Greenlee and Graham Counties – producing copper cathode. Since mining operations have a high load factor (meaning the mines are operable at a level capacity 24 hours a day and seven days a week) there is not much opportunity for peak load reduction. MWE believes under these circumstances a waiver to exclude energy sales to FMI mining operations at Morenci and Safford from the calculation of energy efficiency standards is appropriate and necessary.

Finally, MWE understands that some believe that the savings from mining operations need to be accounted for. MWE does not object to reporting whatever information is received from mining operations as part of complying with the EE Rules and as a term and condition of receiving the above-requested waivers – such as the process and technology improvements in place and the estimated improvements in efficiencies. Even so, simply measuring such savings as reduced energy usage (i.e., simply reporting kWh savings) is likely not accurate – because the mining operations energy usage is largely

[1] A.A.C. R14-2-2401(4).

based on economic trends such as the price of copper. Any reporting that MWE provides from the mining operations will likely reflect the custom nature of mining operations – with the resulting processes and technologies tailored to address the unique needs of those operations.

2. Waiving non-mining load to the extent necessary.

Decision No. 73090 also approved a waiver for MWE excluding non-mining load to the extent necessary to recognize that its initial EEIP is in compliance with the Energy Efficiency Standard requirement A.A.C. R14-2-2404. The Commission recognized that MWE's customer profile and unique service territory made it infeasible to meet the standard as set forth in the EE Rules, but that its portfolio of programs sought to maximize the potential for energy efficiency within MWE's service territory. MWE is requesting that this waiver also remain in place at least through 2015 – and is making the request in accordance with A.A.C. R14-2-2419. There are several reasons MWE believes granting this waiver is appropriate.

First, there is practically no growth in MWE's service territory, other than to accommodate personnel for expanded mining operations. MWE understands that FMI has undertaken improvements to mine-owned housing and constructed some additional residences. This may include adding some Heating, Ventilation and Air Conditioning ("HVAC") units. But these improvements are being done without the need for ratepayer funds and independent of MWE's involvement. Beyond the measures that the mines are doing for mine-owned housing, there is no new home construction.

Second, many of the programs offered by APS or TEP to existing customers (for example) would not be successful in MWE's service territory because those programs are targeted toward new home construction, HVAC or pool pumps. MWE believes that most remaining homes operate with evaporative cooling and have no pool pumps. Therefore, there is a limited portfolio of programs that could be successfully adopted for MWE's service territory.

Third, all of MW&E service territory has natural gas service from Southwest Gas Corporation and most houses have gas space heating and gas water heating. So much of the reduced energy efficiency that is available is through the reduction in the direct use of natural gas, and not of electricity.

As a result, it is unlikely that there are additional programs that can be successfully implemented in MWE's service territory that will result in enough reduced consumption to meet the aggressive standards put forth in the EE Rules.

For these reasons, MWE requested a further waiver to the extent that it falls short of those standards. MWE believes, however, that its portfolio of programs will maximize the potential for energy efficiency within its service territory. This will result in savings for its customers. Further, should there be additional programs (such as a residential

energy assessment program) implemented by an entity with the resources to do so, MWE would be willing to become involved in that effort in a supportive role.

MWE notes that it is not seeking any performance incentive to implement these programs – nor has it sought seek any recovery for lost fixed costs due to implementing any energy efficiency programs. And it is also seeking to maintain the fixed charge from mining operations at both Morenci and Safford to fund programs geared toward MWE's residential and non-mining commercial customers. In other words, none of this funding will go towards efficiency measures for mining operations. This will reduce the amount of funding necessary from non-mining customers.

Plan Portfolio, Costs, Savings & Net Benefits

In Decision No. 73090 (April 5, 2012) the Commission approved MWE's 2012-13 EEIP. The plan consisted of four programs:

- Compact Fluorescent Lamp ("CFL") Program
- Appliance Recycling Program
- Low Income Weatherization ("LIW") Program
- Education & Outreach Program

MWE is proposing to maintain its four Demand Side Management ("DSM") programs as part of its 2014-15 EEIP.

These programs are designed to reduce the use of energy by encouraging customers to implement certain energy-efficient measures, services or practices. The programs will also apply to customers in MWE-owned housing, because while the housing is mine-owned, the resident is responsible for the electric utility bill. Therefore, the resident benefits from efficiency measures that reduce that bill. As explained above, mining operations is providing significant funding for these programs.

These programs were originally selected for its 2012-13 EEIP because MWE believes they have the best chance to be successful in MWE's service territory, given the unique nature of MWE's customer profile. Programs geared toward new home construction, for example, would not be successful because there is very little growth within MWE's service territory at this time. Further, programs addressing HVAC consumption or pool pumps would likely be unsuccessful based on the lack of either within MWE's service territory – with any HVAC installations or new construction within MWE's service territory is being done by FMI with mine-owned housing. Therefore, MWE derived programs from those that are geared towards existing homes, appliances and CFLs due to them having the best chance of success (by reducing energy consumption and aiding the customers in saving money).

These programs were also selected to try and meet the standards put forth in the EE Rules for MWE. According to the EE Rules at R14-2-2404, the Cumulative Annual Energy

Savings must equal to 7.25% of annual retail sales in 2013 for 2014, and 9.50% of annual retail sales in 2014 for 2015. For 2014 and 2015, MWE projects energy sales to be equal approximately 32,000,000 kWh (excluding sales to mining operations at Morenci and Safford).

Assuming those estimates are accurate, MWE will have to meet the following targets to meet the standards in the EE Rules:

Year	kWh Savings
2014	2,320,000 kWh
2015	3,040,000 kWh

MWE, however, does not anticipate meeting these goals. To do so, MWE would have to offer successful programs to reduce energy usage for new construction, HVAC and pool pump savings. But none of those are programs likely to be successful in MWE's service territory. MWE has little to no growth in its service territory. Many of MWE's customers use evaporative cooling and virtually all customers do not have pools. Therefore, those types of programs offered by other utilities in their service territories would not be effective in MWE's service territory. Further, any additional programs MWE could possibly offer would fall substantially short of being cost-effective – even according to the Societal Cost test ("SC Test"). Even so, MWE believes its program offerings will maximize the potential for energy efficiency savings in its service territory, and that it the following kWh savings shown below are obtainable:

Year	kWh Savings achieved
2014	132,731 kWh
2015	265,462 kWh

Also, because MWE's cost for fuel and purchase power is low (due to how it is able to take advantage of power procured for the mining operations in Morenci), MWE's avoided cost is less and the magnitude of the benefit to customers per-kWh used is less pronounced. This impacts the cost-effectiveness of the programs – as measured under the Total Resource Cost test ("TRC Test") and the SC Test.

The kWh savings is based on anticipated savings from each of the following programs:

Program	**Est. kWh savings for 2014**	**Est. kWh savings for 2015**
CFL	89,562	179,124
Appliance Recycling	21,220	42,440
Low-Income Weatherization	21,950	43,900
Education & Outreach	0	0
TOTAL	**132,732**	**265,464**

MWE's budget for its four programs is approximately $23,100 per year for 2014 and 2015. Since MWE's has little experience with these types of programs, this budget is still a preliminary estimate. Even so, MWE has proposed a surcharge designed to recover the estimated budget. More details about the proposed surcharge are provided later in this section. MWE's Energy Efficiency Implementation Budget is also detailed below.

Regarding benefits, the Commission approved new electric rates for MWE in Decision No. 73737 (February 20, 2013). MWE's Energy Charge was set in that case to $0.07628 per kWh (including a base cost of purchase power of $.05000 per kWh). Using the base Energy Charge, MWE anticipates the avoided costs would equal the following for 2014 and 2015:

Year	Utility Avoided Cost for Non-Mining Customers over one year
2014	$10,124.79
2015	$20,249.58

In addition, MWE anticipates the following environmental benefits, based on the type of purchased power most likely to be displaced by the programs for 2014 and 2015.[2]

Environmental Factor	**Value (per Unit)**	**Measurement**	**Amount**
SOx	0.00445	lbs/MWh	1.78 lbs
NOx	0.08455	lbs /MWh	33.67 lbs
CO2	899	lbs/MWh	357,977 lbs
PM10	0.0247	lbs/MWh	9.84 lbs
Water Savings	317	Gallons	126,227 gallons

MWE analyzed the cost-effectiveness of each program and the entire portfolio using the TRC Test and SC Test, using the following assumptions across all programs[3]:

Energy Rate ($/kWh)	$0.07628 (from Decision No. 73737)
TRC Discount Rate	8.50%
Societal Discount Rate	5.00%
Water Savings	$0.0040 per gallon

[2]The values and measurements were taken from APS's Environmental Benefits listed on page 15 in its 2013 Demand Side Management Implementation Plan – Supplemental Filing. The benefits are totaling the total benefits derived for the years 2014 and 2015 only.

[3]The TRC and Societal Discount Rates were taken from the National Action Plan for Energy Efficiency – *Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers* (November 2008) at Page 4-8.

The following shows the cost-effectiveness of the programs within the MWE Energy Efficiency Plan as established by Commission order.

Program	Benefit / Cost Ratio
CFL Program	2.75
Appliance Recycling Program	1.41
LIW Program	1.18[4]
Education & Outreach	N/A

Baseline Information

In terms of estimated demand and energy, MWE anticipates that its retail energy sales for 2014 and 2015 (excluding kWh usage by mining operations at Morenci and Safford) will remain relatively stable, and that its estimate is a reasonably accurate measure of energy sales. Therefore, MWE estimates non-mining retail energy sales to equal approximately 32,000,000 kWh annually through 2015. Maximum peak load for customers excluding FMI Morenci and FMI Safford is estimated to be approximately 5 MW (out of a total of 256 MW) under a baseline condition. MWE does not believe a baseline study would be an efficient use of resources – since there are limited (if any) new market opportunities beyond what is being offered.

Budget

MWE's budget projections are based on the programs it is proposing as part of its 2014-15 EEIP. MWE reviewed public information available as to other utilities' budgets for their respective DSM and Energy Efficiency programs – while specifically tailoring those programs to be successful within MWE's unique service territory. MWE believes its programs have the potential to maximize energy savings within its service territory.

More detailed budgets are provided in the specific program descriptions that follow this introduction:

Program	2014	2015
CFL Program	$3,800	$3,800
Appliance Recycling Program	$1,750	$1,750
Low-Income Weatherization	$16,500	$16,500
Education and Outreach	$1,050	$1,050
TOTAL	**$23,100**	**$23,100**

The majority of the programs are designed to provide direct benefits to customers. MWE proposes to minimize the amounts necessary for implementation and administration, and

[4] Benefits measured over average useful life of weatherization improvements – 11.42 years.

to only include budgeted amounts for tasks and functions necessary to carry out the programs. MWE does not anticipate customers electing to self-direct through MWE. As explained above, both the mining operations at Morenci and Safford have every incentive to reduce energy use and have taken several steps to do so – independent of any programs MWE would implement.

Performance Incentives

MWE is not proposing any performance incentives for its 2014-15 EEIP. MWE may determine to propose performance incentives in future years, but is not seeking them here in consideration for the waiver requests.

Energy Efficiency Adjustor Mechanism Rates for 2014 and 2015

MWE proposes to maintain its Energy Efficiency Adjustor Mechanism ("EEAM") approved in Decision No. 73737 (February 20, 2013)[5] to recover the costs associated with its 2014-15 EEIP. The EEAM is designed to recover costs in the same year in which funds are expended and based upon the energy efficiency budget included in this plan. MWE proposes to roll over into subsequent years any funds not expended in prior years. MWE proposes to have the rates and charges for the EEAM in effect for the two years its plan is effective.

Even though MWE is requesting to waive the energy sales to the mining operations at both Morenci and Safford, both entities are assessed a set amount per month, which MWE proposes to maintain for 2014 and 2015. The per-kWh EEAM rate for residential and non-mining non-residential customers, along with the set amounts to the mines, is designed to recover the budgeted amount for MWE's 2014-15 EEIP.

MWE proposes to maintain the following rates for its EEAM:

- For all residential and non-mining non-residential customers: $0.000245 per kWh per month.
- For mining operations at Safford and Morenci: $650 per month each.

[5] This adjustor was converted from MWE's Energy Efficiency Surcharge ("EES") in its most recent rate case – approved in Decision No. 73737 based on a recommendation from Utilities Division Staff. The EES had been approved in Decision 73090.

Under this proposal, the following amounts are likely to be collected annually from the EES towards the 2012-13 EEIP:

Customer Class	Avg. kWh Use	Rate	Estimated Monthly Total Collected (aggregate)	Estimated Annual Amount Collected (aggregate)	% of MWE's 2014 and 2015 EEIP Budgets
Residential	604	$.000245	$311.35 ($.148 * 2,104 customers)	$3,736.20	16.19%
Non-Residential	4,723	$.000245	$312.04 ($1.16 * 269 customers)	$3,744.48	16.22%
FMI Morenci and FMI Safford	N/A	$650 per month each	$1,300 ($650 * 2 customers)	$15,600	67.59%
TOTAL				**$23,080.68**	**100%**

Decision No. 73737 required MWE to establish an Energy Efficiency bank balance – to track Energy Efficiency costs and collections under its EEAM and to report the bank balance in each EEIP that MWE files. In accordance with that Decision, the current EEAM bank balance for MWE (from its inception through May 20, 2013) is $21,781.40.

MWE Programs for 2012 and 2013

1. Compact Fluorescent Lamp ("CFL") Program

Purpose

In Decision No. 73090, Staff recommended that MWE distribute CFLs through events such as fairs, home shows, festivals, community events and trade shows in its service area – and to also distribute CFLs through local charitable organizations and community groups. Since that time, MWE has worked towards giving away CFLs versus working towards providing discounts from manufacturers. This is because MWE could not find any retailers within its service territory willing to participate in a CFL discount program as MWE originally envisioned.

For 2014 and 2015, MWE proposes that its CFL Program be simply a giveaway program. This will still be one of the simplest and easiest ways customers within MWE's service territory can reduce energy use. MWE intends to increase the availability and information regarding the use of CFLs by customers as one way to reduce energy consumption and increase efficiency of energy use.

The CFL Program goals remain to: (1) increase the availability of CFLs for MWE customers; (2) promote the use and acceptance of CFLs (and other energy efficiency lighting products when appropriate); and (3) provide information regarding the benefits of using CFLs to reduce peak demand and overall energy consumption for its residential and non-residential customers.

Program Description

The program's focus remains on expanding the availability of CFLs within its service territory. Even so, the program will not exclude other energy efficient Energy Star lighting products.

Instead of soliciting discount pricing from manufacturers, MWE will simply purchase and distribute CFLs to customers from its office and at events within its service territory. MWE customers will be made aware of the availability of CFLs. Because MWE has few retailers within its service territory, and because it was more efficient to do so, MWE proposes to change its CFL program to a giveaway program.

This program will be available to all MWE customers, and that both MWE's residential and non-residential customers will participate.

MWE anticipates the following products and services through the program will include:

- CFL products including screw-in spiral CFLs, replacements for standard base incandescent lamps, spot and perhaps flood CFLs and dimming CFLs.

- Educational materials providing information to consumers and retailers about the benefits of using CFLs and other energy efficient lighting products.

While MWE understands the market for CFLs has matured in the last few years, its service territory has still likely not reached the same level of maturity. MWE believes that there is still considerable potential that the CFL giveaway program will enhance the use of energy efficient lighting significantly beyond its current level.

Implementation

Because of the complications described above, MWE's implementation of this program was significantly delayed for 2012 and 2013. Even so, the program was implemented by May 1, 2013.

MWE will provide CFLs to eligible customers while supplies last at its office. MWE may solicit assistance from SEACAP to the extent necessary to giveaway CFLs at events within its service territory and to track the number of CFLs provided and to calculate energy savings. To the extent feasible, MWE will work with the Arizona Energy Office to provide training, education and awareness.

Marketing and Communications

MWE will advertise in the local newspaper regarding the benefits of energy efficient lighting in general and CFLs in particular. It will further provide information regarding the Energy Star label, and the value of Energy Star lighting. MWE will also have general information regarding the benefits of energy efficiency lighting to customers – including information how CFLs can reduce customer energy bills, provide equal or better lighting output and quality, and benefit the environment. Finally, MWE will provide information regarding the safe and proper disposal of CFLs.

Measurement and Evaluation

MWE will collect necessary data to track how the program is meeting its stated goals and objectives. This includes the following data:

- The number of CFLs provided to customers – organized by type.
- Estimated kWh savings per type of CFL provided.

MWE will use this data and best efforts to track the following information:

- Aggregate savings in kW (capacity) and kWh (energy).
- Environmental benefits, including reduced emissions and water savings.
- Incremental benefits and net benefits, in dollars.

- Costs incurred for the program – disaggregated by type of cost (e.g. costs for the CFLs, administrative costs, monitoring and evaluating).

MWE will evaluate the progress of this program toward meeting energy efficiency goals, including noting any problems, the level of customer participation, and when modifications to the program are warranted or justified.

Program Budget

Table 1 – 2014 to 2015 Budget

Year	**2014**	**2015**
Total Budget	$3,800	$3,800
CFLs provided	$3,600	$3,600
Administrative Costs	$200	$200
Administration as a % of Total Budget	5.26%	5.26%

Estimated Energy Savings

Table 2 provides the assumed base lamp wattage and corresponding CFL wattages as recommended by manufacturers. This table also provides the expected demand and energy savings:

Table 2 – Estimated Energy Savings from CFLs

Fixture Type	ES Integral CFL			
Incandescent Fixture Watt Range[6]	29	43	53	72
CFL Fixture Watt Range	9	14	19	23
Energy Saved [7]	200 kWh	290 kWh	340 kWh	490 kWh
Savings based on the replacement cost of incandescent bulbs[8]	$15.26	$22.12	$25.94	$37.38

[6] Based on the new energy standards that taking affect from January 1, 2012 through January 1, 2014 in accordance with the Energy Independence and Security Act of 2007 ("EISA"). See http://www.energystar.gov/ia/products/lighting/cfls/downloads/EISA_Backgrounder_FINAL_4-11_EPA.pdf?8ac8-f4e7. This modifies the baseline by shifting 100, 75, 60 and 40 Watt bulbs to 72, 53, 43, and 29 Watts respectively. This was done in accordance with Findings of Fact 45 through 47 in Decision No. 73090 and to accurately state the value of energy savings for cost-benefit purposes.

[7] Based on a 10,000-hour life.

[8] Using energy rate equaling $0.07628 per kWh approved in Decision No. 73737.

Table 3 shows costs of CFLs:

Table 3 – Cost of CFLs[9]

Watt-Equivalent	Cost
29	$2.20
43	$2.20
53	$2.87
72	$3.34

Table 4 shows estimated energy savings from this Program for 2014 and 2015. Table 4 shows projected annual environmental benefits.

Table 4 – Projected Lamp Sales and Capacity and Energy Benefits[10]

Year	2014	2015
Projected Lamp Sales	1,357	1,357
Non-mining peak savings (kW)[11]	44.78	89.56
Cumulative Energy Savings (kWh)[12]	89,562	179,124

MWE believes that CFL purchases will result in water savings and reductions in NOx and SOx if CFLs replaced incandescent bulbs. The following is its best estimate of savings:

Table 5 – Projected Environmental Benefits, 2014 and 2015[13]

	Value (per Unit)	**Measurement**	**Amount**
SOx	0.00445	lbs/MWh	1.20 lbs
NOx	0.08455	lbs/MWh	22.72 lbs
CO2	899	lbs/MWh	241,548 lbs
PM10	0.0247	lbs/MWh	6.64 lbs
Water Savings	317	Gallons	85,173 gallons

[9] See e.g. http://www.lightbulbsdirect.com for verification of cost information.
[10] Assuming giveaways are 25% of each type of bulb (9, 14, 19 and 23 Watt CFL).
[11] Average Watt savings per bulb (33 Watts) multiplied by number of bulbs given away.
[12] One-year savings assuming average use per day of approximately 5.47 hours (average life of 5 years with 10,000 hours of use). Average lifetime savings of 330 kWh divided by 5 years equals 66 kWh. That multiplied by 1,357 bulbs equals yearly kWh savings of 89,562 kWh.
[13] Calculated based on estimated cumulative savings of approximately 268.69 MWh over 2014 and 2015.

Program Cost Effectiveness

MWE assessed the CFL Program using the TRC Test and the SC Test. MWE considered the following factors when determining the cost effectiveness of this program:

- Net demand and energy savings attributable to the program;
- Net incremental cost to the customer of purchasing qualifying products;
- TEP's Program administration costs;
- The present value of Program benefits including avoided costs over the life of the measures;
- Lost revenues.

Table 6 – Cost-Effectiveness Analysis Assumptions

Program Term	2 years
Average use per year	2,000 hours (5.47 hours per day)
Average kWh saved per year.	330 kWh
Energy Rate ($/kWh)	$0.07628
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated these assumptions from data contained within programs for TEP and APS.

Table 7 is the benefit/cost analysis for this Program.

Table 7 – Benefit/Cost Analysis Results Summary

Resource Cost Portfolio Benefit	$17,409.90
Resource Cost Portfolio Costs	$6,455.86
Resource Cost Net Benefits	$10,954.04
Societal Cost Test Portfolio Benefits	$18,930.60
Societal Cost Test Portfolio Costs	$6,893.42
Societal Cost Test Portfolio Net Benefits	$12,037.17
Total Resource Cost Test	2.70
Societal Cost Test	2.75

2. Appliance Recycling Program

Purpose

MWE plans to continue implementing its Appliance Recycling Program for 2014 and 2015. The purpose is to provide a means for the removal of old or second refrigerators and freezers in households. MWE implements use of an appliance recycling contractor to schedule pick-up appointments, appliance pick-up, and recycling services. The Appliance Recycling Program goals are to: (1) reduce energy consumption; and (2) keep inefficient appliances out of the used market.

Program Description

The program focuses on providing a means for MWE customers to recycle appliances – particularly refrigerators and freezers. All residential and non-residential customers are eligible for this program.

MWE will offer, through its appliance recycling contractor, free pick-up and recycling of old or second operable refrigerators and freezers. These older refrigerators and freezers will be recycled in an environmentally safe manner. Further, as a means of additional incentive, customers will be offered a cash rebate of $30. Refrigerators and freezers will be recycled in accordance with established U.S. Environmental Protection Agency best practice industry standards; this includes proper disposal of those appliances with Chlorofluorocarbons ("CFCs").

Implementation

MWE had difficulty obtaining a local contractor to recycle refrigerators and freezers in accordance with the parameters of the program. This delayed implementation of the program in 2012 and 2013 as a result. After significant efforts, MWE was able to secure an Arizona contractor based out of Phoenix, Arizona to recycle the refrigerators. The program was implemented on May 1, 2013.

The appliance recycling contractor will be responsible for picking up old and second refrigerators and freezers and delivering those appliances to a facility that will properly dispose of appliances in accordance with U.S. EPA best practice industry standards. MWE works with the contractor to ensure customer eligibility and facilitate the scheduling of pick-ups to properly dispose of and recycle turned-in appliances. MWE provides payment of incentives for those customers who have had old or second appliances picked up by the appliance recycling contractor. Because of MWE's relatively small service territory and remote location, it does not expect any significant free rider or spillover issues. MWE still aims to serve approximately 20 homes per year through this program.

Marketing and Communications

MWE will advertise in the local newspaper regarding the costs of operating second or older less efficient refrigerators and freezers. MWE will further provide education and promotional materials designed to inform customers about the benefits of recycling second refrigerators and freezers in particular – including materials from the EPA's new "Energy Star® Recycle My Old Fridge Campaign". MWE will provide information regarding the cost of operating second refrigerators and freezers and older more inefficient appliances, the benefits of replacement with Energy Star® qualified models, and the importance of proper disposal and recycling of older units.

Measurement and Evaluation

MWE will collect necessary data to track how the program is meeting its stated goals and objectives. This includes the following data:

- The number of refrigerators and freezers recycled through the program.
- The specifications of units recycled (if feasible) and the specifications of units replacing the recycled units.

MWE will use this data and best efforts to track the following information:

- Aggregate savings in kW (capacity) and kWh (energy).
- Environmental benefits, including reduced emissions and water savings.
- Incremental benefits and net benefits, in dollars.
- Costs incurred for the program – disaggregated by type of cost (e.g. costs for the pickup and recycling of appliances, administrative costs, monitoring and evaluating).

MWE will evaluate the progress of this program toward meeting energy efficiency goals, including noting any problems, the level of customer participation, and when modifications to the program are warranted or justified.

Program Budget

Table 1 – 2014 to 2015 Budget

Year	**2014**	**2015**
Total Budget	$1,750	$1,750
Incentives (Discount Pricing)	$600	$600
Removal Costs	$1,000	$1,000
Administrative Costs	$150	$150
Administration as a % of Total Budget	8.6%	8.6%

The Cost per removal can range from $10 to $50 as stated at http://www.epa.gov/ozone/title6/608/disposal/household.html. MWE estimates that the cost of removal is towards the high end given that MWE's service territory is remote.

Estimated Energy Savings

Total annual participation goals and demand and energy savings are present in Tables 2 and 3. MWE believes that up to 20 appliances annually will be recycled by the program.

Table 2 – Estimated Annual Energy and Demand Savings per Unit

Measure	Refrigerators	Freezers
Net Annual kWh Savings per Unit with Losses	1,061	1,061
Net kW Savings per Unit with Losses	0.153	0.153

From APS' 2010 Energy Efficiency Implementation Plan – Appliance Recycling Program (July 15, 2009) at Table 3.

Table 3 – Estimated Energy and Demand Savings

Year	2014	2015
Number of expected participating units	20	20
Peak (kW)	3.06	6.12
Energy Savings (MWh) (cumulative)	21.22	42.44

Table 4 – Projected Environmental Benefits, 2014 and 2015[14]

	Value (per Unit)	**Measurement**	**Amount**
SOx	0.00445	lbs/MWh	0.283 lbs
NOx	0.08455	lbs /MWh	5.38 lbs
CO2	899	lbs/MWh	57,230 lbs
PM10	0.0247	lbs/MWh	1.57 lbs
Water Savings	317	Gallons	20,180 gallons

Program Cost Effectiveness

MWE assessed the Appliance Recycling Program using the TRC Test and the SC Test. MWE considered the following factors when determining the cost effectiveness of this program:

- Net demand and energy savings attributable to the program;
- Net incremental cost to the customer of purchasing qualifying products;

[14] Calculated based on estimated cumulative savings of 63.66 MWh over 2014 and 2015.

- MWE's Program administration costs;
- The present value of Program benefits including avoided costs over the life of the measures; and
- Lost revenues.

Table 5 – Cost-Effectiveness Analysis Assumptions

Program Term	2 years
Energy (base cost) ($/kWh)	$0.07628
Number of refrigerators recycled per year	20
Average kWh savings per refrigerator	1,061 kWh
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated these assumptions from data contained within programs for TEP and APS.

Table 6 is the benefit/cost analysis for this Program.

Table 6 – Benefit/Cost Analysis Results Summary

Resource Cost Portfolio Benefit	$4,124.94
Resource Cost Portfolio Costs	$2,973.09
Resource Cost Net Benefits	$1,151.85
Societal Cost Test Portfolio Benefits	$4,485.24
Societal Cost Test Portfolio Costs	$3,174.60
Societal Cost Test Portfolio Net Benefits	$1,310.64
Total Resource Cost Test	1.39
Societal Cost Test	1.41

3. Low Income Weatherization Program

Purpose

MWE recognizes that utilities typically consume a larger percentage of low-income family's income than for higher-income families – especially those at or below the poverty level. MWE further recognizes that many low-income customers live in older or mobile homes built before energy efficient construction methods were developed. MWE proposes to continue its LIW Program and provide financial assistance to install measures that improve comfort and reduce overall energy consumption for eligible customers. The LIW Program will remain focused on reducing electric consumption. Because most homes in MWE's service territory have evaporative cooling, it is unclear how much this program will reduce summer peak, but it should reduce electric consumption. MWE believes the LIW program will help to lower the average household energy consumption for low-income customers and improve the quality of life for these customers.

Program Description & Implementation

MWE originally proposed this program as a result of conversations with Southwestern Energy Efficiency Project ("SWEEP"). MWE then contacted SEACAP regarding providing support and assistance to its existing low-income weatherization programs and expanding those to within MWE service territory. SEACAP indicated to MWE that it would do so, and report the requisite savings with MWE's service territory to the Company. MWE encountered delays in implementing this program in 2012, but worked with SEACAP to implement the program by the second quarter of 2013.

The program remains focused on providing a means for MWE low-income customers to reduce their electric and natural gas consumption. MWE is aware of other programs that provide funding, such as the Federal Department of Energy ("DOE") and the Low Income Home Assistance Program ("LIHEAP"). MWE's funding will provide additional assistance to complete additional home repair, equipment repair or replacement and other nominal weatherization steps that impact energy consumption.

MWE intends to still provide funding to SEACAP for selected approved weatherization items. SEACAP agency representatives will determine what items are installed for each home. Funding provided to LIW agencies from DOE limits installation of items installed to only those measures that combine, contribute a minimum of 20% energy savings due to LIHEAP requirements. Funding from MWE will not be limited to the percentage of energy savings and may allow agencies to complete additional work in each home.

Further, SEACAP Agencies may be asked to install certain energy saving products in any home they enter through its Housing Repair, Rehabilitation, & Weatherization, or its Emergency Assistance programs. This may support an increase in installation of low-flow showerheads, faucet aerators, CFLs, or hot water heater blankets.

MWE's program will be promoted through SEACAP, which directly provides weatherization services in MWE's service territory. MWE will provide funding to SEACAP when MWE receives documentation of the work completed. SEACAP will determine participant eligibility and priority and supervise completion of all work – as well as providing program administration, marketing, planning coordination, labor, materials, equipment, and tracking results. Based on conversations with SEACAP, MWE understands that the maximum contribution must be increased to $3,000 per residence for those low-income customers or homes that require extensive home repair for significant energy (kWh) savings.

Marketing and Communications

MWE will inform customers about the LIW Program, in addition to any referrals made by local Department of Economic Security ("DES") representatives, health care service agencies and individual case workers. MWE will provide information about SEACAP, which is engaged in directly providing weatherization to customers within its service territory.

Measurement and Evaluation

MWE, through SEACAP, will collect necessary data to track how the program is meeting its stated goals and objectives. This includes the number of homes weatherized and what measures were taken for each home to improve comfort and reduce energy consumption.

MWE will use this data and best efforts to track the following information:

- Aggregate savings in kW (capacity) and kWh (energy).
- Environmental benefits, including reduced emissions and water savings.
- Incremental benefits and net benefits, in dollars.
- Costs incurred for the program – disaggregated by type of cost (e.g. costs of measures used to weatherize homes, administrative costs, monitoring and evaluating).

MWE will evaluate the progress of this program toward meeting energy efficiency goals, including noting any problems, the level of customer participation, and when modifications to the program are warranted or justified.

Program Budget

Table 1 – 2014 to 2015 Budget

Year	2014	2015
Total Budget	$16,500	$16,500
Weatherization Funding	$16,000	$16,000
Administrative Costs	$500	$500
Administration as a % of Total Budget	3.03%	3.03%

Estimated Energy Savings

MWE anticipates that at least five low income customers could be served annually in MWE's service territory through local weatherization agencies – if $3,000 is used per home. If the maximum is not used for each home, then MWE anticipates serving a total of seven customers per year. Viewing the benefits from the perspective of average total energy (kWh) savings over the lifetime of improvements (including insulation, weatherization, hot water, lighting and cooling/heating) – and assuming seven customers are served at the average cost – the program has a positive net benefit. The energy savings from this activity is presented in Table 2.

Table 2 – Estimated LIW Program Estimated Energy and Demand Savings[15]

Year	Weatherization in 2014	Weatherization in 2015
Non-Coincident Peak (kW) per home	0.37	0.37
Coincident Peak (kW) per home	0.078	0.078
Savings (kWh) per home	1,114	1,114
Savings (therms) per home	69	69
Total Savings (in kWh) per home.	3,135.7	3,135.7
Total savings (average lifetime of 11.42 years) per home	35,809.69	35,809.69
Estimated average cost per home	$2,285	$2,285
Number of customers assuming estimated average cost per home	7.00	7.00

Table 3 – Projected Environmental Benefits[16]

	Value (per Unit)	Measurement	Amount
SOx	0.00445	lbs/MWh	2.23 lbs
NOx	0.08455	lbs /MWh	42.39 lbs
CO2	899	lbs/MWh	450,722 lbs

[15] Based on TEP's Filing in Docket No. E-01933-07-0401 (July 2, 2007), Attachment 3, at Page 6 and Table 5. LIW Program at Table 4 on page 6. 1 therm equals approximately 29.3 kWh.

[16] Calculated based on estimated cumulative savings of 501.34 MWh for 14 weatherized homes over the average useful life of 11.42 years over 2014 and 2015.

PM10	0.0247	lbs/MWh	12.38 lbs
Water Savings	317	Gallons	158,931 gallons

Program Cost Effectiveness

MWE assessed the LIW Program using the TRC Test and the SC Test. MWE considered the following factors when determining the cost effectiveness of this program:

- Net demand and energy savings attributable to the program;
- Net incremental cost to the customer of purchasing qualifying products;
- MWE's Program administration costs;
- The present value of Program benefits including avoided costs over the life of the measures;
- Lost revenues.

Table 4 – Cost-Effectiveness Analysis Assumptions

Program Term	2 years
Program Benefit – Average Useful Life	11.42 years
Number of Homes Weatherized per year	7.00
Energy ($/kWh)	$0.07628
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated these assumptions from data contained within programs for TEP and APS.

Table 5 is the benefit/cost analysis for this Program. Assuming the benefits last for ten years, this program will be cost-effective for seven homes weatherized at $2,285 apiece if the total cumulative kWh savings are achieved. Regardless, MWE believes this can be a valuable program for low-income customers. Table 5 bases the Program cost at $16,500.

Table 5 – Benefit/Cost Analysis Results Summary

Resource Cost Portfolio Benefit	$32,484.77
Resource Cost Portfolio Costs	$28,032.02
Resource Cost Net Benefits	$4,452.75
Societal Cost Test Portfolio Benefits	$35,322.21
Societal Cost Test Portfolio Costs	$29,931.97
Societal Cost Test Portfolio Net Benefits	$5,390.24
Total Resource Cost Test	1.16
Societal Cost Test	1.18

4. Education & Outreach Program

Purpose

The purpose of the Education & Outreach Program is to provide additional materials to communicate clearly the concepts of DSM, energy efficiency and demand response.

Program Description

MWE will communicate the benefits of energy conservation and peak demand to customers, as well as educating customers about energy efficiency products including CFLs. MWE will do so in the following ways:

- For residential customers – provide materials that show simple measures on how customers can reduce their electric bills. MWE will also provide information regarding its other energy efficiency programs to the customers eligible for those programs.
- For commercial customers – provide materials that show general energy conservation information. MWE will also provide information regarding its CFL and Appliance Recycling Programs.
- Education programs for schools within MWE's service territory designed to show students the importance and value of energy conservation.

Implementation

Regarding residential and commercial education, MWE will have materials available at its office regarding the benefits of energy conservation, DSM and demand response. MWE will provide a bill insert and publish notice of the availability of such materials for pickup. MWE expects to continuously implement the program.

Marketing and Communications

See the Implementation section above. MWE may seek other means to notify and inform customers on the benefits of energy efficiency. This may include advertising on the local Morenci radio station.

Measurement and Evaluation

MWE will monitor the program and attempt to get feedback from its customers as to the effectiveness of the program and whether it persuades customers to pursue energy efficiency measures beyond what is being provided through the Company's 2014-15

EEIP. MWE will also solicit feedback from participating schools on whether the materials provided are effective.

Program Budget

Table 1 – 2014 to 2015 Budget

Year	2014	2015
Total Budget	$1,050	$1,050

Estimated Energy Savings

MWE cannot calculate energy and demand savings for this program. MWE believes that the program is still beneficial in informing customers who live in a relatively remote area about energy efficiency and its benefits.

Program Cost Effectiveness

MWE cannot calculate whether the program will be cost-effective in terms of kWh and kW, but believes it will help to heighten awareness of how energy efficiency can directly benefit customers.